

How to Estimate Plant Population (Corn)

Harvest Population	Planting Rate	Inches between seed when planting at these row widths					
		20"	30"	36"	38"	40"	
18,000	Requires	20,222	15.6	10.5	8.7	8.3	7.8
19,000	Requires	21,100	14.8	9.9	8.3	7.8	7.4
20,000	Requires	22,200	14.2	9.4	7.9	7.4	7.1
22,000	Requires	24,400	12.8	8.6	7.1	6.8	6.4
24,000	Requires	26,700	11.8	7.8	6.5	6.2	5.9
26,000	Requires	28,900	10.8	7.2	6.0	5.7	5.4
28,000	Requires	31,100	10.0	6.7	5.6	5.3	5.0
30,000	Requires	33,300	9.4	6.3	5.2	5.0	4.7
32,000	Requires	35,600	8.8	5.9	4.9	4.6	4.4
34,000	Requires	37,800	8.4	5.5	4.6	4.4	4.2

Based in 10% stand loss by harvest.
For plants, measure the distance in inches between 11 plants and divide by 10.

How to Estimate Plant Population Per Acre (Corn)

Count the number of stalks in a length of row equal to 1/1000 of an acre. Make several counts in separate sections of the cornfield, figure the average of these samples, then multiply this number by one thousand.

Row Width	Row Length Equal to 1/1000 Acre
20"	26.2 ft.
30"	17.4 ft.
36"	14.5 ft.
38"	13.8 ft.
40"	13.1 ft.

Planting Depth

Put the kernel deep enough to be in moist ground and no deeper. Seed corn will need to be planted deeper in sandy soils than in heavy clay soils. Experiments have shown that where moisture is adequate, the depth of planting has no effect on the depth of the permanent root system. Normally 1 to 1½ inches is the recommended planting depth.

Essential Requirements for Producing High Yields of Corn

To obtain and maintain good yields of corn we must add and/or replace at least part of the soil nutrients required and removed by the crop. Fertility reserves in the soil can provide part of the needs of the growing crop. Additional nutrients must be added to maintain the soil fertility and produce top yields of corn. The chart below indicates the total amounts of Nitrogen, Phosphorous and Potash required for various yield levels. To know what levels exist in your soil and accurately determine the amount you need to apply, soil samples and tests should be taken every 1 to 2 years. Proper pH (acidity) levels must be maintained for optimum nutrient uptake by the plant. A pH level of 6.5 is generally considered best for corn.

Yields of Shelled Corn	Inches between seed when planting at these row widths		
	Nitrogen	Phosphorus	Potash
150 Bu.	225	90	180
175 Bu.	262	105	210
200 Bu.	300	120	240
250 Bu.	375	150	300
300 Bu.	450	180	360

Other Important Practices for Maximum Corn Yields

1. Plant early at optimum populations.
2. Plant shallow but so seed is in moist soil.
3. Control weeds and insects.
4. Supply minor elements if needed.
5. Plant all recommended Ruff's hybrids.
6. Harvest early.
7. Store properly.

Estimating Yields of Corn

Using the chart below, measure the length of row to equal 1/1000 of an acre. Pick and shell all of the ears in the measured distance. Weight the shelled corn, test it for moisture and correct the weight to 15.5% moisture. Multiply this weight by 1000 and divide by 56 to give estimated bushels per acre. Example: 10 pounds of shelled corn at 25.5% moisture corrected to:

$$15.5\% = 8.8 \text{ pounds} \times 1000 = 8800 \div 56 = 157 \text{ bushels of corn per acre.}$$

To obtain a more accurate yield estimate, sample should be taken from at least 5 representative locations in the field and the results averaged.

Length of row to equal 1/1000 acre

Row Width	Row Length
40"	13' 1"
38"	13' 9"
36"	14' 6"
34"	15' 5"
30"	17' 4"
20"	26' 2"